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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,415	01/27/2004	Martin N. Andersson	557SC-CIP [2630.3118.004]	2178
7590 05/04/2005			EXAMINER	
William H. Francis Reising, Ethington, Barnes, Kisselle, P.C. P. O. Box 4390 Troy, MI 48099-4390			HOANG, JOHNNY H	
			ART UNIT	PAPER NUMBER
			3747	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

**Office Action Summary**

Application No.

10/765,415

Applicant(s)

ANDERSSON ET AL.

Examiner

Johnny H. Hoang

Art Unit

3747

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-14 and 17-37 is/are rejected.
- 7) ☒ Claim(s) 7-9, 15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Inventorship***

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### ***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because the abstract is too long. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 3747

5. Claim 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Masaki et al (US 3,861,366).

Regarding claim 37, the reference of Masaki et al discloses an air-fuel mixture supply control system for internal combustion engine including the following subject matters:

a first input coupled to an engine speed sensor (40) for receiving an electronic speed signal representative of engine speed (Figs. 1-2, col. 5, lines 5-10, and col. 5, lines 31-39),

a second input coupled to an engine temperature sensor (45) for receiving an electronic temperature signal representative of engine temperature (Figs. 1-2, col. 5, lines 10-13, and col. 5, lines 40-44),

an output coupled to a valve control device (31) for providing that device with an electronic air/fuel signal that affects the air-to-fuel ratio of a combustible mixture being provided to the engine (col. 4, lines 10-47, and col. 5, lines 52-67), and

an electronic processing device (60) coupled to said first input for receiving said speed signal, coupled to said second input for receiving said temperature signal, and coupled to said output for providing said air/fuel signal, wherein said processing device is capable of utilizing said speed signal and said temperature signal to determine said air/fuel signal (see above discussions).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-6, 10-14, and 17-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masaki et al as applied in the rejected claim 37 in view of Kurosu et al (US 5,191,531).

Art Unit: 3747

Regarding claim 1, the reference of Masaki et al discloses the claimed invention except for the ignition device for providing that device with an electronic ignition signal that affects the ignition timing of the engine.

However, the reference of Kurosu et al discloses a fuel injection control system that includes a CDI unit 33 is provided as an ignition device, a signal line of the CDI unit 33 is connected to the input port of the I/O interface 25 of the control unit 20 for applying CDI pulse (col. 4, lines 45-52), and affects the ignition timing of the engine (col. 5, lines 22-57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified and/or provided the control system of Masaki et al with the ignition device for providing that device with an electronic ignition signal that affects the ignition timing of the engine, as taught by Kurosu et al, in order to control the electronic ignition signal for the operation of the engine, since more information is combined and can be processed more precisely at a higher technology facility.

Regarding claim 2, the reference of Kurosu et al further discloses the ECU relay 28 has a pair of contact 28b and 28c an electromagnetic coil 28a, the contact 28b is connected to the constant voltage circuit 27 and the battery 30, the other contact 28c is connected to the input port of the I/O interface 25 and the battery 30 (col. 3, lines 36-64).

Regarding claims 3, and 4, as discussed in claim 1.

Regarding claim 5, the reference of Masami et al further discloses valve control device is a latching solenoid that controls the air-to-fuel ratio of the combustible mixture by controlling a carburetor air bleed unit (col. 3, line 6 through col. 4, line 2).

Regarding claims 6, 10-14, and 17-19 as above discussions.

Regarding claims 20-33, as above discussions.

Regarding claims 34-36, as above rejections.

Art Unit: 3747

***Allowable Subject Matter***

8. Claims 7-9, 15, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnny H. Hoang whose telephone number is (571) 272-4843. The examiner can normally be reached on Monday - Thursday (7:00Am-5: 30Pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Yuen can be reached on (571) 272-4856.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JHH  
April 28, 2005

Johnny H. Hoang  
Examiner  
Art Unit 3747

  
**Tony M. Argenbright**  
Primary Examiner  
Art Unit 3747